



University of Groningen

Treatment of shoulder complaints in general practice

Winters, J.C.; Jorritsma, W.; Groenier, K.H.; Sobel, J.S.; Meyboom-de Jong, B.; Arendzen, J.H.

Published in:
British Medical Journal

IMPORTANT NOTE: You are advised to consult the publisher's version (publisher's PDF) if you wish to cite from it. Please check the document version below.

Document Version
Publisher's PDF, also known as Version of record

Publication date:
1999

[Link to publication in University of Groningen/UMCG research database](#)

Citation for published version (APA):

Winters, J. C., Jorritsma, W., Groenier, K. H., Sobel, J. S., Meyboom-de Jong, B., & Arendzen, J. H. (1999). Treatment of shoulder complaints in general practice: long term results of a randomised, single blind study comparing physiotherapy, manipulation, and corticosteroid injection. *British Medical Journal*, 318(7195), 1395-1396.

Copyright

Other than for strictly personal use, it is not permitted to download or to forward/distribute the text or part of it without the consent of the author(s) and/or copyright holder(s), unless the work is under an open content license (like Creative Commons).

Take-down policy

If you believe that this document breaches copyright please contact us providing details, and we will remove access to the work immediately and investigate your claim.

Downloaded from the University of Groningen/UMCG research database (Pure): <http://www.rug.nl/research/portal>. For technical reasons the number of authors shown on this cover page is limited to 10 maximum.



Treatment of shoulder complaints in general practice: long term results of a randomised, single blind study comparing physiotherapy, manipulation, and corticosteroid injection

Jan C Winters, Wim Jorritsma, Klaas H Groenier, Jan S Sobel, Betty Meyboom-de Jong and Hans J Arendzen

BMJ 1999;318:1395-1396

Updated information and services can be found at:
<http://bmj.com/cgi/content/full/318/7195/1395>

These include:

References

This article cites 5 articles, 2 of which can be accessed free at:
<http://bmj.com/cgi/content/full/318/7195/1395#BIBL>

2 online articles that cite this article can be accessed at:
<http://bmj.com/cgi/content/full/318/7195/1395#otherarticles>

Rapid responses

One rapid response has been posted to this article, which you can access for free at:
<http://bmj.com/cgi/content/full/318/7195/1395#responses>

You can respond to this article at:
<http://bmj.com/cgi/eletter-submit/318/7195/1395>

Email alerting service

Receive free email alerts when new articles cite this article - sign up in the box at the top right corner of the article

Topic collections

Articles on similar topics can be found in the following collections

[Clinical Research](#) (513 articles)
[Other Rheumatology](#) (1308 articles)
[Drugs: musculoskeletal and joint diseases](#) (269 articles)

Notes

To order reprints of this article go to:
<http://www.bmjournals.com/cgi/reprintform>

To subscribe to *BMJ* go to:
<http://bmj.bmjournals.com/subscriptions/subscribe.shtml>

- 7 Partridge JW. Consultation time, workload, and problems for audit in outpatient clinics. *Arch Dis Child* 1992;67:206-10.
- 8 Pal B, Taberner D, Readman L, Jones P. Why do outpatients fail to keep their clinic appointments? Results from a survey and recommended remedial actions. *Int J Clin Pract* 1998;52:436-7.
- 9 Frankel S, Farrow A, West R. Non-attendance or non-invitation? A case-control study of failed outpatient appointments. *BMJ* 1989;298:1343-5.
- 10 Bottomley WW, Cotterill JA. An audit of the factors involved in new patient non-attendance in a dermatology out-patient department. *Clin Exp Dermatol* 1994;19:399-400.
- 11 Potamitis T, Chell PB, Jones HS, Murray PI. Non-attendance at ophthalmology outpatient clinics. *J R Soc Med* 1994;87:591-3.
- 12 Andrews R, Morgan JD, Addy DP, McNeish AS. Understanding non-attendance in outpatient paediatric clinics. *Arch Dis Child* 1990;65:192-5.
- 13 Cottrell D, Hill P, Walk D, Dearnaley J, Ierotheou A. Factors influencing non-attendance at child psychiatry out-patient appointments. *Br J Psychiatry* 1988;152:201-4.
- 14 Herrick J, Gilhooly ML, Geddes DA. Non-attendance at periodontal clinics: forgetting and administrative failure. *J Dent* 1994;22:307-9.
- 15 Koch A, Gillis LS. Non-attendance of psychiatric outpatients. *S Afr Med J* 1991;80:289-91.
- 16 Campbell J, Szilagyi P, Rolewold L, Doane C, Roghmann K. Patient-specific reminder letters and pediatric well-child-care show rates. *Clin Paediatr* 1994;33:268-72.
- 17 Read M, Byrne P, Walsh A. Dial a clinic—a new approach to reducing the number of defaulters. *Br J Healthcare Management* 1997;3:307-10.
- 18 Royal Mail. Promotional literature. *NHS Magazine*, 1997:34.
- 19 Sims J. How missing patients can be urged to attend. *Healthcare Management* June;1995:16.
- 20 Ward R. Outpatients: a ringside view. *BMJ* 1998;316:1541-2.
- 21 Hamilton W, Round A, Taylor P. Dictating clinic letters in front of the patient. *BMJ* 1997;314:1416.
- 22 King A, David D, Jones HS, O'Brien C. Factors affecting non-attendance in an ophthalmic outpatient department. *J R Soc Med* 1995;88:88-90.
- 23 Waterston T, Lazaro C. Sending parents outpatient letters about their children: parents' and general practitioners' views. *Qual Health Care* 1994;3:142-6.
- 24 Humfress H, Schmidt U. Effect of sending clients a personalised summary letter is being studied. *BMJ* 1997;314:1416-7.
- 25 Jenkins R. Quality of general practitioner referrals to outpatient departments: assessment by specialists and a general practitioner. *Br J Gen Pract* 1993;43:111-3.

(Accepted 30 March 1999)

Treatment of shoulder complaints in general practice: long term results of a randomised, single blind study comparing physiotherapy, manipulation, and corticosteroid injection

Jan C Winters, Wim Jorritsma, Klaas H Groenier, Jan S Sobel, Betty Meyboom-de Jong, Hans J Arendzen

Descriptive studies have shown that shoulder complaints can be persistent and recurrent, requiring long term evaluation of treatment.¹ Unfortunately, in most randomised studies comparing treatments for shoulder complaints the study period varies from a few weeks (trials of non-steroidal anti-inflammatory drugs) to 3-6 months (injection therapy and physiotherapy trials).²⁻⁴

In a trial in 1994-5 of treatment of shoulder complaints in general practice we showed that in a study period of 11 weeks, injection therapy with a corticosteroid was superior to physiotherapy and manipulative therapy in the patients whose complaints originated from the structures of the glenohumeral joint, the subacromial space, or the acromioclavicular joint (synovial group).⁵ In the patients whose complaints related to functional disorders of the cervical spine, the upper thoracic spine, or the adjoining ribs (shoulder girdle group), manipulation was superior to physiotherapy. To assess the various treatments in the long term, we re-examined these patients two to three years after the original study.

Patients, methods, and results

In September 1997 we sent a questionnaire to all 172 patients who had taken part in the earlier trial, inquiring about persisting, recurrent, or new shoulder complaints since the initial treatment. Diagnostic procedures and further treatment were assessed. We asked patients with current complaints to indicate if they felt "cured" and invited those who did not feel cured for a physical examination. Details about the

assessment of the patients, the definition of the diagnostic categories, feeling cured, and the treatments given are described elsewhere.⁵ Statistical testing was done with the χ^2 test.

We received 130 (76%) questionnaires that could be evaluated. The distribution of the patients' characteristics across the five treatment groups was similar to the original study. A substantial proportion (64%) of the non-respondents had paid jobs. The table shows that 29/40 (73%) patients in the shoulder girdle group had experienced a shoulder complaint at some time since the earlier trial. Thirteen of the 22 (59%) patients in the physiotherapy group had current complaints, of whom 8 (62%) did not feel cured. In the manipulation group 6/18 (33%) patients had current complaints, of whom 4 did not feel cured. Most (18/19) patients with current complaints had had previous complaints. No significant differences were found between the two treatment groups for the items examined. Only two patients reported referral for specialist assessment.

In the synovial group 47/90 (52%) patients had experienced a shoulder complaint at some time since the earlier trial. Twenty two (24%) patients had current complaints, of whom 21 (95%) did not feel cured. Nineteen (21%) patients had consulted their general practitioner, and 12 (13%) patients were referred to a specialist, in most cases an orthopaedic surgeon. No significant differences were found between the three treatment groups for the assessed variables.

Of the 33 patients not feeling cured, 25 attended for a physical examination. Ten (40%) patients seemed to have changed diagnostic category.

Department of Family Practice, University of Groningen, Ant Deusinglaan 4, 9713 AW Groningen, Netherlands

Jan C Winters, general practitioner
Klaas H Groenier, statistician
Jan S Sobel, general practitioner
Betty Meyboom-de Jong, professor of general practice

Rehabilitation Centre Beatrixoord, Haren, Netherlands
Wim Jorritsma, specialist in manipulation medicine
Hans J Arendzen, specialist in rehabilitation medicine

Correspondence to: Dr J C Winters, Nieuwe Schoolweg 2A, 9756 BB Glimmen, Netherlands
jwinters@knmg.nl

BMJ 1999;318:1395-6

Characteristics of 130 patients who took part in 1994-5 trial who were followed up in 1997

Complaints and treatment	Shoulder girdle group		Synovial group		
	Manipulation (n=18)	Physiotherapy (n=22)	Injection therapy (n=38)	Manipulation (n=26)	Physiotherapy (n=26)
Complaint at some time since earlier trial	12	17	18	18	11
Current complaints	6	13	9	7	6
Previous complaints and current complaints	5	13	9	7	5
Not feeling cured	4	8	9	7	5
Consulted general practitioner	6	12	9	13	6
Referred to specialist	0	2	5	1	6
Supplementary examination	0	2	3	2	3
Treatment after finishing trial:	6	11	10	11	8
Physiotherapy	3	5	5	1	3
Injection therapy	0	3	5	9	5
Manipulation	2	2	1	0	1
Other	2	2	2	2	3
Limitations in activities in daily living	9	11	20	11	13
Self treatment	8	14	19	12	13

No significant differences were found between the treatment groups of the two diagnostic groups with χ^2 testing. The separate categories of the treatment after finishing the trial could not be tested because of small numbers in each category.

Comment

The positive results of both injection therapy and manipulation versus physiotherapy in the original trial seemed to be short term effects. In the long term no significant differences between the various treatment groups were found. As many as half of the patients experienced recurrent complaints.

Shoulder complaints are not necessarily troublesome for all patients. Consequently, some patients feel cured despite their current complaints. Also, 64% of the non-respondents had paid employment; does this suggest that they were too busy to consider their shoulder complaint as anything more than minor?

The diagnostic categories of shoulder pain changed over time, which might be important for the therapeutic strategy.

Considering that a substantial proportion of patients with shoulder complaints experienced long term or recurrent complaints, new studies should analyse the factors that cause persistent shoulder complaints. Only with this knowledge can successful long term therapeutic strategies be developed.

We thank the rehabilitation centre Beatrixoord for giving us room and administrative facilities to conduct this study. We thank general practitioners Luit-Jan Lukkes, Henk Spelde, Mello Maaskant, and Jan Woudhuizen for their help in examining the patients and Siebring Schokker for entering the data into the computer.

Contributors: HJA and BMJ initiated the study. WJ did the overall coordination. WJ, JCW, JSS, and HJA collected the data. KHG did the statistical analysis. JCW wrote the article, with comments from the other authors, and will act as guarantor for the study.

Funding: None.

Competing interests: None declared.

- 1 Van der Windt DAWM, Koes BW, Boeke MP, Deville W, Jong BA de, Bouter LM. Shoulder disorders in general practice: prognostic indicators of outcome. *Br J Gen Pract* 1996;46:519-23.
- 2 Van der Windt DAWM, van der Heijden GJMG, Scholten RJPM, Koes BW, Bouter LM. The efficacy of non-steroidal anti-inflammatory drugs (NSAIDs) for shoulder complaints. A systematic review. *J Clin Epidemiol* 1995;48:691-704.
- 3 Van der Heijden GJMG, van der Windt DAWM, Kleijnen J, Koes BW, Bouter LM. Steroid injections for shoulder disorders: a systematic review of randomised clinical trials. *Br J Gen Pract* 1996;46:309-16.
- 4 Van der Heijden GJMG, van der Windt DAWM, de Winter AF. Physiotherapy for patients with soft tissue shoulder disorders: a systematic review of randomised clinical trials. *BMJ* 1997;315:25-30.
- 5 Winters JC, Sobel JS, Groenier KH, Arendzen JH, Meyboom-de Jong B. Comparison of physiotherapy, manipulation, and corticosteroid injection for treating shoulder complaints in general practice: randomised, single blind study. *BMJ* 1997;314:1320-5.

(Accepted 24 November 1998)

Email submissions from outside the United Kingdom

We are now offering an email submission service for authors from outside the UK. The address is papers@bmj.com

Ideally our email server would link seamlessly with our manuscript tracking system, but for now it does not, which is why we are offering the service only to authors outside the UK. Most post in the UK arrives the next day, so UK authors have the least to gain in speed of delivery from email delivery. As soon as our systems improve we will invite email submissions from everyone.

If you choose to send your submission by email please would you send the text and any tables and figures as attached files, together with a covering letter giving all your contact details (postal

address, phone, fax, and email address). We can read files created with most word processing, graphics, and spreadsheet programs.

When your submission is received in our email box you will receive an automatic acknowledgment to show that it has arrived. If the submission is incomplete we will contact you and ask you to resend the missing information.

Once the submission is complete we will register it on our manuscript tracking system and you will receive a standard acknowledgment in the post.

Letters to the editor should continue to be sent direct to www.bmj.com as rapid responses or to letters@bmj.com